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Presents

12+

Muscle

Testing

Techniques

" Testing; One…Two…Three…Four… "

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All models are at least 18 years of age. The techniques, ideas, and suggestions in this document are not intended as a substitute for proper medical advice! Consult your physician or health care professional before performing or receiving a massage, particularly if you are pregnant or nursing, or if you are elderly, or if you have any chronic or recurring conditions. Any application of the techniques, ideas, and suggestions in this document is at the reader's sole discretion and risk.

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*NEUTRAL RESISTANCE MUSCLE TEST

(N R M T)



1.



2.



3.



4.



5.



6.



7.



8.

1. Start in a neutral position
2. Externally rotate their leg and have the client resist (Try to internally rotate) for 7-12 seconds
3. Internally rotate their leg and have the client resist (Try to externally rotate) for 7-12 seconds
4. Have the client try to abduct their leg and resist for 7-12 seconds
5. Have the client try to adduct their leg and resist for 7-12 seconds
6. Have the client try to lift their leg up and resist for 7-12 seconds
7. Have the client try to bring their leg down to the table and resist for 7-12 seconds
8. Return leg to neutral position

*After you are done, ask the client were they felt pain or discomfort, and then treat that area

*PASSIVE MUSCLE TEST

(P M T)



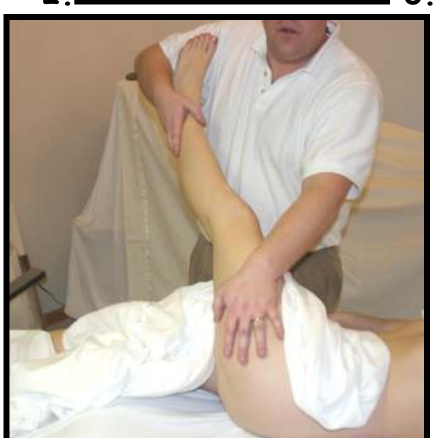
1.



2.



3.



4.



5.

1. Start in a neutral position
2. Isolate the muscle into a passive contraction (To the point of resistance)
3. Have the client relax and bring the limb back to the original position
4. Immediately test the other leg to see if there is a difference in the degree of stretch
5. Have the client relax and bring the limb back to the original position (Treat the side that has less R.O.M.)

*Also, after they are done; ask the client were they felt pain or discomfort, and then treat that area

*DOUBLE PASSIVE MUSCLE TEST

(D P M T)



1.



2.



3.



4.

1. Start in a neutral position
2. Isolate both limbs into a passive contraction (To the point of resistance)
3. Have the client relax and bring the limbs back to the original position
4. Treat the side that has less R.O.M.

*Also, after they are done; ask the client were they felt pain or discomfort, and then treat that area

*ACTIVE MUSCLE TEST

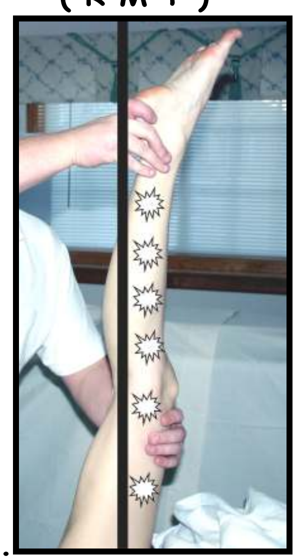
(A M T)

1. 
1. 
1. 
2. 

1. Have the client move the area around and tell you were the pain is
2. After they are done; ask the client were they felt pain or discomfort, and then treat that area

*RESISTIVE MUSCLE TEST

(R M T)

1. 
2. 
3. 

1. Start in a neutral position
2. Isolate the muscle into a passive contraction (To the point of resistance) and have the client resist (7-12 seconds)
3. Have the client relax (2 seconds) and bring the limb back to the original position

*After you are done; ask the client were they felt pain or discomfort, and then treat that area

Four possible findings on resisted tests:

- **Strong and painless:** no problem or neurological deficit involving the tested muscle or tendon.
- **Strong and painful:** a minor problem of the tested tendon or muscle exists.
- **Weak and Painful:** there may be a partial rupture of the muscle or tendon, or may be the result of painful inhibition of the muscle, as seen with a fracture or neoplasm.
- **Weak and painless:** may be an interruption of the nerve supply to the muscle being tested, correlate with the neurologic test; or there may be a complete rupture of the tendon or muscle.

Graded Muscle Strength

- **Grade 5** is normal, demonstrating a complete (100%) range of movement against gravity, with firm resistance offered by the therapist. (Normal strength) The muscle can move the joint it crosses through a full range of motion against gravity and against "full" resistance applied by the examiner.
- **Grade 4** is 75% efficiency in achieving range of motion against gravity with slight resistance. (Good strength) The muscle can move the joint it crosses through a full range of motion against gravity and against moderate resistance applied by the examiner.
- **Grade 3** is 50% efficiency in achieving range of motion against gravity without resistance. (Fair strength) The muscle can move the joint it crosses through a full range of motion against gravity but not against any additional resistance.
- **Grade 2** is 25% efficiency in achieving range of motion with gravity eliminated. (Poor strength) The muscle can move the joint it crosses through a full range of motion only if the part is positioned so that the force of gravity is eliminated.
- **Grade 1** shows slight contractility without joint motion. (Trace strength) Muscle contraction can be seen or palpated but strength is insufficient to produce motion, even when gravity is eliminated.
- **Grade 0** shows no evidence of contractility or palpable contraction.

Ryan Jay Hoyme

*APPLIED KINESIOLOGY

" Finger Test "



1.



2.



2.



2.



3.



4.



5.

1. Have the client hold their thumb/pinky together and try to pull both of the apart, but stop just before the fingers separate (Always do this before you test an area)
2. Lightly drag your fingers over a muscle group
3. Then try and pull the fingers apart (Use same pressure as #1)
4. If the is a problem or weakness in the muscle, you will be able to pull their fingers apart
5. If there is no problem, you will not be able to pull their fingers apart

*APPLIED KINESIOLOGY

" Arm Test "



1.



2.



3.



3.



3.



4.



5.



6.

1. Have the client extend their arm
2. Try and push their arm down (But not past 90 degrees)
3. Lightly drag your fingers over a muscle group
4. Try and push their arm down again (Use same pressure as #2)
5. If the is a problem or weakness in the muscle, you will be able to pull their arm down
6. If there is no problem, you will not be able to pull their arm down

*APPLIED KINESIOLOGY

" Question Test "

1. 

2. 

3. 

4. 

5. 

1. Have the client extend their arm and try and push their arm down (But not past 90 degrees)
2. Have the client relax
3. Ask the client a question and try and push their arm down (Use same pressure as #2)
4. A false answer will indicate movement when trying to push down on their arm
5. A true answer will indicate no movement when trying to push down on their arm

*This test can also be performed with the fingers

*APPLIED KINESIOLOGY

" Food & Beverage Test "

1. 
2. 
3. 
4. 
5. 
6. 

1. Have the client extend their arm
2. Try and push their arm down (But not past 90 degrees)
3. Have the client relax
4. Place a piece of food/beverage on their shoulder (Use same pressure as #2)
5. A false answer will indicate movement when trying to push down on their arm (Use same pressure as #2)
6. A positive answer will indicate no movement when trying to push down on their arm

*A good thing for their body will indicate no movement when trying to push down on the arm

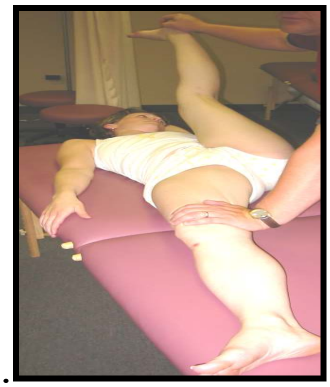
*This test can also be performed with the fingers

*Massage Therapists can not perform this on clients (For your own personal use)

*SLOW MUSCLE TEST

(S M T)

" Slow Motion for Me "

1. 
2. 
2. 
2. 
2. 
2. 
2. 
2. 
2. 
3. 

1. Start in a neutral position
2. Slowly move their limb around (Take at least 20-30 seconds to go through one motion) without going to their full R.O.M., until you moved their limb in every direction (Ex. Rotation, Flexion, Extension, Abduction, Adduction…) (Do not let the limb rest on the table at any time) (Perform this for at least 5+ minutes)
3. Slowly bring the limb back to the original position

*Great for finding holding patterns

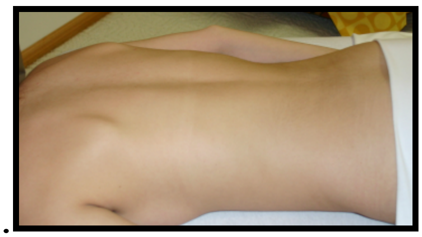
*Can also be performed only by the client

*TRIGGER POINT MUSCLE TEST

(T P M T)

1. 

2. 

3. 

1. Start in a neutral position
2. Palpate one area or palpate both areas at once (Same pressure and location as other palpated area)
3. Have client relax in the original position

*Evaluate both sides the same and determine what side is more tender

*END FEEL MUSCLE TEST

(E F M T)

The 'End Feel'

Some of the most valuable assessment information is derived from relatively simple procedures such as passive range-of-motion tests. While many massage practitioners have been exposed to the fundamental concepts of active and passive range-of-motion testing, most have not learned how to use this information effectively in a clinical environment. In this article, we will focus particular attention on the "end feel" that is evaluated during passive range-of-motion testing. Valuable information can be derived from thorough examination of the end feel. To perform a passive movement evaluation, the practitioner instructs the client to relax as much as possible preceding the movement. It is important to have the greatest degree of muscular relaxation prior to beginning the movement, to improve the accuracy of the evaluation and eliminate muscular effort as the cause of any pain that is felt. One of the most important factors to investigate with passive range-of-motion testing is the end feel. **The end feel is the quality of movement perceived by the practitioner at the very end of the available range of motion**. The end feel can reveal a great deal about the nature of various pathologies. James Cyriax, the British orthopedic physician who developed one of the most commonly used systems for physical examination; specified six different 'End Feels' when he first described them in his writings : Bone to bone , Muscle spasm , Capsular , Springy block , Tissue approximation and Empty.

End Feel is the sensation imparted to the therapist's hands at the limit of the available range of movement, after the first significant stop of a passive movement. Every joint has a characteristic end feel that is dependent on the anatomy of the joint and the direction of movement tested. After the first significant resistance is met (first stop), more force is carefully applied as the end feel is judged to be **soft**, **firm** or **hard**. All three have an **elastic** quality to varying degrees and should be symptom free.

1. **Soft end feel:** is due to soft tissue approximation or stretching (e.g., elbow or knee flexion). Examples are Edema, synovitis.
2. **Firm end feel:** is due to capsular or ligamentous stretching (e.g., supination). Examples are muscle spasm, capsule, muscle or ligament shortening.
3. **Hard end feel:** occurs when bone or cartilage meet (e.g., elbow extension) Abnormal end feels have a quality that is uncharacteristic for the joint movement being tested. For example shortened connective tissue gives a firmer less elastic end feel and intra articular swelling produces a soft resistance. If the movement cannot be completed this is known as an empty end feel. Examples are osteoarthritis, myositis ossificans, or fracture.

Normal End Feel

Bony end-feel: an abrupt, hard-feeling stop to movement due to the anatomical structures of the joint limiting motion. An example is the end feel for extension of the elbow.

Soft-tissue approximation end-feel: a soft end-feel where two soft tissue structures contact on another, limiting further motion. An example is in flexion of the elbow, in which the elbow flexors and wrist flexors press on each other to limit further motion. Knee Flexion (contact b/t leg & thigh)

Tissue stretch end-feel: a rubbery end-feel where a soft tissue limits further motion at a joint. An example of the tissue stretch with muscles would be hip flexion with the knee held in extension, in which motion is stopped by the hamstrings.

Abnormal End Feel

Less-elastic: This is usually associated with scar tissue or connecting tissue contracture.

More-elastic: This is commonly seen with areas of increased muscle tone or shortened muscles.

Springing Block: This almost always indicates some type of internal dysfunction or deterioration such as meniscal tear. A rebound is felt and can often be seen.

Empty: No reason for the stop of motion other than patient pain and immediate spontaneous reaction. An example would be in shoulder impingement, in which pain from the supraspinatus tendon being compressed will limit how far the arm can be abducted. Mechanically there is no further restriction, but the pain will prevent the individual from allowing further motion. An example is joint inflammation, bursitis, abscess, fracture

Premature or Early: The motion stops before it should as in Rheumatoid Arthritis., Osteoarthritis., or ligamentous capsular contraction.

Extended: As in constitutional hypermobility of joints.

Muscle spasm: When muscles are in spasm, they may abruptly halt motion prior to what should be the normal range of motion. It is likely that pain will be felt at the end of this range, because the muscle in spasm will be stretched.

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